

The future of international research collaboration

Thank you.

In particular, I wanted to thank David Cannadine for that warm welcome, and the British Academy for giving me the time and space to talk to you today.

As an MP and government minister, my base may be in Parliament and the departments across the park. But as a historian and writer, it is spaces like this that are my true spiritual home.

Since becoming minister – the first-time round – I've been keen to advocate for the value of the humanities and social sciences in society. But my contributions, I know, are not a patch on the far greater support that the British Academy gives to these disciplines, day in, day out, both nationally and internationally.

The study of peoples, cultures and society are fundamental to who we are.

So, more than perhaps any other organisation in the UK, the British Academy knows the power of words to start new discussions, to build bridges, to form new shared narratives – to illuminate the darkness, and to heal divisions.

It is in that spirit that I want to make this speech today – a speech that I have wanted to make for quite a while, since first coming into the role 10 months ago, but especially since returning to the role very recently.

And it's about that most emotive of topics – that source of so much discussion, consternation and concern in Britain today.

I'm of course talking about Europe and the need for us to get Brexit done.

First, let me say this. As a historian, I know that Britain is at its greatest when we reach out to the world, when we break free of our island mentality, when we see ourselves – yes, as a powerful, dynamic and proud nation, but also as an important part of a much greater whole.

And nowhere in our society is this clearer than in our universities and wider knowledge economy. After Brexit, we want not just a friendly relationship with our European neighbours and allies, but also to reach out and build better connections with the wider world.

But I am here today as your Universities Minister, and in this role I have made it my mission to get out of Westminster and Whitehall, to come to you, to understand your perspectives.

As I have said in previous speeches, I have always believed that engagement is the key to better policy. That has been the very purpose of my 40-plus visits to different universities to date – to listen, to learn and to take

action where it matters.

And what I have found, absolutely everywhere I have visited, is a research and innovation ecosystem that is truly international.

I'm always struck when walking down corridors in departments across the country by the wealth of international names adorning the doors. The staff, students and researchers I meet on my visits come from right across the globe.

To be a British institution means to be an international institution.

Our universities, and innovative businesses, are powered by openness, and are strengthened by it.

I'm talking about openness to ideas, to talent, to internationalism, and to collaboration – all of which bring real vibrancy to our universities and our wider research base in academia and industry alike.

This is a vibrancy that inspires us, that emboldens us, and that lifts us up.

If we want to see evidence of 'Global Britain', then we need to look no further.

One of the enablers of this great openness has been our partnerships with the continent of Europe, over many centuries, helping us to develop a shared sense of culture, shared collective experiences, and a like-minded approach to the values of civilisation, enlightenment and liberty.

Only recently, at the British Library, I was struck by the Anglo-Saxon Kingdoms exhibition, how truly interconnected our shared past with the continent is.

In the exhibition made possible by a shared endeavour with European museums and institutions across nations, one of the most striking loans was the Codex Amiatinus, the oldest surviving complete Latin Bible.

Now residing in the Laurentian Library in Florence, for centuries the book was assumed to have been created in Italy, until an erased inscription was detected, revealing that the book had in fact been manufactured in north-east England, and was sent as a gift to the pope in 716 AD.

It is just one example of many shared partnerships that has defined our relationship with the continent over the centuries.

Our intellectual and cultural bonds with Europe run deep and have lasted for centuries longer than any EU programme. They are at the heart of our identity and the foundation of our civilisation. They prospered long before the EU's existence, and must continue after we leave. As has been said, we are leaving the EU – we are not leaving Europe.

It is no coincidence that Shakespeare chose to set many of his great plays in other European nations, like Italy and Denmark.

That our great masters like Constable and Gainsborough were frequently inspired by art movements from the continent – from France and the Netherlands.

Even the Beatles crafted their trade in the bars and clubs of Hamburg.

And that our thinking and politics have developed in line with the great 'Dichter und Denker', the thinkers and philosophers of Germany.

But it's not all one-sided.

The UK, too, has given our European neighbours so much in return.

British composers and musicians have firmly impacted the European music scene – from William Byrd, who became one of the greatest composers of European Renaissance music, to the late, great Queen frontman, Freddie Mercury, who proudly sang about the European city 'Barcelona' in 1987.

British architects, too, have shaped the cityscapes of many of our European neighbours. Just take the dome on top of the Berlin Reichstag, designed by none other than our very own Sir Norman Foster.

Irrespective of Brexit, sowing the seeds of intellectual and cultural unity across Europe is something that absolutely can and must continue.

Yet, we cannot ignore the basic fact some of our largest international partnerships in science and research to date have been undertaken while we've been a member of the EU, where we've worked with our international partners to attract talented minds to the UK, forging new shared missions, and broadening our horizons.

I believe this recent history shows us the true value of international collaboration – and we should draw inspiration from this as we form new and wider collaborations outside the EU.

For instance, in 2017, nearly 20,000 UK higher education students and academics undertook placements abroad, as part of the Erasmus+ mobility scheme– which is itself not confined to the EU alone.

In return, the UK has hosted over 32,000 European higher education students.

Overseas placements like this bring untold value to individuals, to businesses and to culture and society as a whole.

Or just look the fact that the UK has secured a massive 13% of all funds in the Horizon 2020 funding pot, totalling around €6 billion. There is no doubt that Horizon 2020 is successful because it has been powered and inspired by British excellence.

And, as you know, the government has put in place guarantees for Horizon 2020, which apply whether or not we leave with a deal.

And if we needed further evidence of where British excellence has given us a

leading role to play, we need only look at fusion energy research – a technology with immense transformative potential.

Look at Culham, praised just last week by the Prime Minister for its efforts to help the UK become a ‘global lead’ in nuclear fusion – and probably the first time the word ‘tokamak’ has featured in any Prime Ministerial address!

Until then, I’d have bet that Culham was probably not a place that many people outside of research and innovation circles would have heard of.

But, in the world of nuclear research, it’s as well known as Cape Canaveral or the Large Hadron Collider.

The work happening at the Culham Centre for Fusion Energy is years, if not decades, ahead of the game.

Right at the heart of Culham is the Joint European Torus, or JET – currently the world’s largest and most powerful tokamak, and the focal point of the European fusion research programme.

And once JET has wound down, Europe’s focus will move to Southern France, where engineers are hard at work building ITER in Marseille – an experiment inspired by Culham, building on the successes of JET.

Of course, outside the EU we will be able to invest in our own research programmes.

But I am committed to doing everything I can to ensure we can keep playing a key role in the global ITER project, to make sure we continue to lead from the front in European fusion.

And as you would have heard the Prime Minister announce last week, we are about to start developing the next generation of fusion reactor in Culham, alongside a major campus upgrade. This programme is known as STEP – and will build a fusion reactor not just for science, but for energy production.

This has the potential to be a game-changer, creating a new source of abundant clean energy, right here in Europe.

The benefits of which will last for decades, even centuries.

It is an experiment that shows our great British enterprising spirit – a spirit that will in turn attract the world’s leading scientists and engineers. It will build on JET and ITER. And it will renew and strengthen our strong international bonds.

Through nuclear research, we can see that decades-long collaboration, across borders, is central to scientific endeavour.

And we find deep and long-lasting collaborations in many other areas besides.

Just look at CERN.

More than 20 research groups across the UK helped prepare for the Large Hadron Collider. And it was only a few years ago that it made the major breakthrough of discovering the Higgs Boson, the so-called 'God Particle' first proposed by British scientist Peter Higgs in 1964.

British involvement in international research collaborations doesn't get more historic than that.

And this also applies to space, where our membership of the European Space Agency – or ESA – gives the UK access to a huge €6 billion R&D budget and some of the most exciting space missions since the Apollo moon landings.

Two weeks ago, I spoke at the UK Space Conference in Newport, touching on the importance of international collaborations in space through ESA.

And it's here that I want to reiterate a really important point I made in that speech: that while we are leaving the EU, we will not be leaving ESA – which is not a European Union Institution.

I also said that if ESA did not exist, someone would have to invent it.

International collaborations of this sort allow us to do things at an unprecedented scale.

But it's not just about advancements in the natural and physical sciences. European partnerships have a significant role to play in Humanities and Social Sciences research too.

The European University Institute (EUI) is just one case in point – and an example of European collaboration on education and research.

As many of you will already know, the EUI is a world-class institution, and the UK has greatly benefited from its relationship with it.

It has produced some of our finest scholars and public figures, from political scientist Simon Hix to BBC journalist and Today programme presenter Mishal Husain.

I am pleased to announce that we have concluded an interim arrangement with the EUI, to cover the period from Brexit until the middle of next year, as a transitional measure if we leave the EU without a deal. And now that we have concluded an interim arrangement, I have asked my officials to explore the possibility of a future relationship with the EUI.

This announcement today, one which I have been working on for some time, is just one of the many continued demonstrations that I have been able to make of our willingness to continue our partnerships with our European research partners and universities after Brexit.

For instance, in May I announced that EU students coming to England to start their higher education in 2020/21 will have home fee status and financial support, guaranteed for the duration of their courses.

And in July, I signed a new memorandum of understanding with Portuguese Minister Manuel Heitor, for the UK to join the AIR Centre, strengthening collaboration in the Atlantic region on ocean, space, energy and climate change science.

Also in July, I announced that the UK would be joining the Euro-Bioimaging European Research Infrastructure, hosted by Finland – enabling UK life scientists to access state of the art imaging technologies.

And back in March I announced a £45 million investment to expand the European Bioinformatics Institute, just south of Cambridge – demonstrating the UK's leading capability in both life sciences and open research methods.

Continued co-operation, continued participation, regardless of our future relationship with the EU.

I know continued cooperation in education and training with our European partners also remains a key priority for you, as it does for the government. And that's why I want to reassure you today that, irrespective of the outcome of current discussions, we want to make sure that students and young people can continue to benefit from international exchanges.

We have sought to put in place robust contingency plans so that Erasmus+ projects that are already underway can continue if we leave without a deal.

I hope that we will secure a deal shortly: a deal, which we all know would enable our continued participation in EU programmes such as Horizon 2020 and Erasmus+.

But if there is not movement from the EU, we are ready to leave without a deal. Politicians cannot choose which public votes they wish to respect. We will be ready for Brexit on 31 October.

Our Horizon 2020 no-deal guarantees are now in place. New guidance, [‘UK participation in Horizon 2020 after Brexit’](#), is being published today with further details. Treasury funds are set aside for this and the Erasmus+ underwrite guarantee. All of this funding is additional to the current domestic science budget.

These guarantees are really important. They mean that:

1. Important cross-border collaboration will be able to continue after we have left the EU. The guarantee would cover all successful competitive UK bids to Horizon 2020 submitted before the UK leaves the EU.
2. The guarantee extension would apply to successful UK bids to Horizon 2020 schemes which are open to third country participation from point of exit in a no-deal scenario until the end of 2020. Both the guarantee and extension would apply for the lifetime of projects.

3. The funding of UK applicants for all successful bids for Erasmus+ projects that are approved by the Commission before Brexit will be covered by the government, for the lifetime of these projects.

In addition to the guarantee and extension, the government committed on the 8 August to ensuring that all UK bids to mono-beneficiary calls – the European Research Council, Marie Skłodowska Curie Actions and the European Innovation Council Accelerator calls that are submitted to Horizon 2020 before Brexit would be evaluated in all scenarios.

This means researchers and innovators can continue to submit proposals to Horizon 2020 with confidence, right up to the point of exit, knowing that the best proposals will be funded – regardless of how we leave the EU.

But I know that these guarantees also need to be communicated effectively – to give you the reassurances you need to continue with your European collaborations.

It is vital that all EU research organisations who are partnered with British researchers or institutions know that the British government has made these guarantees, and that we stand by them.

Previously I have written to all higher education and research ministers in every EU country, along with several of the European academies, to highlight the guarantees that have been announced.

Now, through the British Council, Universities UK, the Confederation of British Industry, and UKRI, I will shortly be reaching out to all of our international partners across Europe, to make sure that the guarantees we have put in place are well-understood and effective.

This is critical to ensuring that we are protecting the interests of our students and researchers, both abroad and in the UK.

I will also be convening these key stakeholders for regular meetings in the run-up to Brexit, to ensure that we are doing everything we can to step up our communications efforts in this area.

Let me be clear, though, we would prefer to leave with a deal, and have been working in an energetic and determined way to get that deal. But these guarantees are there if we need them, should we have to leave without a deal on 31 October.

Researchers and innovators across the UK can continue to participate in Horizon 2020 programmes with confidence.

Ultimately, however, we will not be able to take part in negotiations on association to Horizon Europe until the programme has been finalised.

Continued international collaboration is the foundation for our strong future as a knowledge economy.

And that is the key point I want to make today.

I know that many out there are concerned about Brexit, and our future participation in European networks. To those people, I want to say this: while we are leaving the EU, we are not necessarily leaving our European collaborations behind.

It also means looking to the rest of the world, to broaden our horizons, and to form new partnerships.

This is the reason we published our [International Research and Innovation Strategy](#), and our [International Education Strategy](#) – both of which I announced earlier this year and which provide a clear framework for international collaboration.

In the last 3 years, over 52% of the UK's academics publications were produced in collaboration with international partners. Our International Research and Innovation Strategy aims to protect this, but also enhance this.

It is also why we have announced the return of the Graduate Route – or the 2-year post study work visa.

We have also announced reforms to the highly skilled visa route to make it easier for talented people to come to the UK to work in research and innovation roles.

To succeed after Brexit, we will do everything we can to make sure that the UK remains open and welcoming to the brightest minds.

Our future as a global knowledge economy depends on this Freedom of Talent – on protecting and enhancing our attractiveness as the best place to study, to undertake research, and to start and grow an innovative business.

That's why I will soon be publishing the outcomes of the independent review that Professor Sir Adrian Smith led, which will provide advice on options for funding international collaboration on research and innovation. These options will be especially important if we don't associate with Horizon Europe.

I know that many of you will have engaged with the review over the last few months, and I thank you for this engagement.

Sir Adrian and his colleague on the review, Professor Graeme Reid, are true experts in their field and, between them, have many years of knowledge and understanding of what the UK's opportunities might be.

I am therefore confident that, through their insight, we'll have some great new ideas to think about. Together with the advice we've also taken from the sector directly, this will give us opportunities to extend our international collaborations beyond Europe. Opportunities that I would be keen for us to explore after Brexit, deal or no deal.

If we are to become a truly global knowledge economy, then we must be open to collaborating in new ways.

After all, we have a greater research effort in the UK, and a more admired higher education system, than pretty much anywhere else in the world, let alone in Europe.

Only this week, the UK has won another 2 Nobel prizes. First, the Nobel Prize in Physiology and Medicine, given jointly to 3 scientists from Oxford, Harvard and Johns Hopkins, for their work on cell oxygen sensing. Second, the Nobel Prize for Physics – a collaboration between the universities of Cambridge, Princeton, and Geneva.

This again highlights the incredible strength of the UK, but with it also the power of our international research collaborations.

Our International Research and Innovation Strategy which I launched during our Chairmanship of EUREKA, demonstrates the future direction of our strategic priorities, which are truly global.

This builds upon the work we have begun this decade, with the investment in the Global Challenges Research Fund and the Newton Fund, partnering with countries across the globe, expanding research excellence in fields of study that are meeting global challenges for the future.

And as the minister who signed Net Zero by 2050 into law, and who helped to deliver our successful COP26 bid – which is in fact a partnership with another one of our great research partners, Italy – I recognise that the challenges that we meet are international ones.

This is about cooperation, collaboration, and the collective desire to solve great challenges and to seize great opportunities.

It is about recognising that we are at our best when we strive for ideals that transcend borders – the pursuit of knowledge, the search for truth, the transmission of skills and learning from one generation to the next, regardless of the place where you were born.

It's about striving to understand, recognise and respect our diverse perspectives, in search of shared values and shared goals.

This is about much more than a handful of schemes. It is about what people are capable of when we work together.

It is also about recognising that these research partnerships are not simply about the funding, vital though that is. These are not impersonal bonds, tied by transaction: they are your partnerships, created by you, the academic communities.

And indeed, these are friendships. Friendships cultivated over decades, the result of hours of dedicated meetings, exchanges, building your networks.

I recognise all this.

We all have a duty, in our research communities, and myself as your minister, to continue to work together, to expand the possibilities for the acquisition

of knowledge, and the potential for creation and discovery.

You have my commitment that I will continue to do everything I can, to protect what you have crafted, to work to continue the friendships and alliances that you have built. I am delighted to announce that we are able to continue our involvement in the EUI, but it signals a wider willingness, that, though we are leaving the EU, we will not be leaving Europe.

But I also want us to embrace the possibility that we can go even further, that we can reach even wider. To embrace a future where our pursuit of knowledge includes new perspectives, where the search for truth takes us to new places, and where our great European tradition of learning can be re-shaped into a truly global endeavour, not just for the benefit of the UK, but for the benefit of the whole world.

That is when our modern knowledge economy becomes truly 'powered by openness' – when the UK becomes truly global.

Thank you.